



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D5807-7

Job Sheet 207514



Part No: D5807-7

Job Qty: 16 pcs

Part Name: Stringer



Part Weight: 0 lbs

Job Created: 2/27/20

Due Date: 3/27/20

Type: Stock

Status: New

Priority: Medium

Job Tracking No:

Created By: Jennifer Renwick

Description:

Note: URF 2020-525 DWG D5807 Rev A IPP Rev. A 2020.02.14 New issue DP Verify DD

Ship Via:

POSITIVE RECALL

EFFECTIVE 2/27/20 AUTH 500

RELEASED DATE

POSITIVE
RECALL

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard	Workcenter/Supplier		Sign-off
					Setup Run Hrs Hrs	Workcenter / Supplier	Lead Time	
100	Large Fab - Basket - 1	16 pcs	3/27/20	0.00	3.20	Large Fab - 1		
						Large Fab - 10		
						Large Fab - 2		
						Large Fab - 3		
						Large Fab - 4		
						Large Fab - 5		
						Large Fab - 6		
						Large Fab - 7		
						Large Fab - 8		
						Large Fab - 9		
						Large Fab - 11 (Various)		
						Large Fab - 12		
110	QC 5	16 pcs	3/27/20	0.00	0.00	QC 5 - 10		
						QC 5 - 12		
						QC 5 - 17		
						QC 5 - 18		
						QC 5 - 19		
						QC 5 - 22		
						QC 5 - 24		
						QC 5 - 3		
						QC 5 - 43		
						QC 5 - 49		
						QC 5 - 51		
						QC 5 - 58		
						QC 5 - 68		
						QC 5 - 9		
						QC 5 - 50		
						QC 5 - 30		
						QC 5 - 40		
						QC 5 - 61		
						QC 5 - 81		



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S264023



Part: D5807-7

Job No: 207514

Serial No/Batch: S264023

Revision: A

Inspector:

Exp Date:

Instructions:

Date: 03/17/20

DAS

MAR 17 2020 40
9-89

Plx 3/11/20 3:55 PM Dart, Renwick, Jennifer

120 Packaging 3-1 - Stock - B4B 16 pcs	3/27/20	0.00 0.00	Packaging 3 - 1 - B4B	
			Packaging 3 - 2 - B4B	
			Packaging 3 - 3 - B4B	
			Packaging 3 - 4 - B4B	
			Packaging 3 - 5 - B4B	
			Packaging 3 - 6 - B4B	
			Packaging 3 - 7 - B4B	
			Packaging 3 - 8 - B4B	
			Packaging 3 - 9 - B4B	
			Packaging 3 - 10 - B4B	
			Packaging 3 - 11 - B4B	MFL
			Packaging 3 - 12 - B4B	
			Packaging 3 - 13 - B4B	
			Packaging 3 - 14 - B4B	
			Packaging 3 - 15 - B4B	
			Packaging 3 - 16 - B4B	
			Packaging 3 - 17 - B4B	
			Packaging 3 - 18 - B4B	
			Packaging 3 - 19 - B4B	
			Packaging 3 - 20 - B4B	
			Packaging 3 - 21 - B4B	
			Packaging 3 - 22 - B4B	
			Packaging 3 - 23 - B4B	
			Packaging 3 - 24 - B4B	
			Packaging 3 - 25 - B4B	
			Packaging 3 - 26 - B4B	
			Packaging 3 - 27 - B4B	
			Packaging 3 - 28 - B4B	
			Packaging 3 - 29 - B4B	
			Packaging 3 - 30 - B4B	
			Packaging 3 - 31 - B4B	
			Packaging 3 - 32 - B4B	
			Packaging 3 - 33 - B4B	
			Packaging 3 - 34 - B4B	
			Packaging 3 - 35 - B4B	
			Packaging 3 - 36 - B4B	
			Packaging 3 - 37 - B4B	
130 QC 21 - SA 16 pcs	3/27/20	0.00 0.00	QC 21 - SA - 21	
			QC 21 - SA - 70	
			QC 21 - SA - 53	MAR 17 2020

Part Op 100 - 1- Cut stringer as per dwg 2- Deburr
 Descriptions: 110 - QC5- Inspect part completeness to step on W/O
 120 - Identify as per dwg & Stock Location: *WAC04*
 130 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M4130NTS0.500W.035	4130 Square Tube .500 X .500 X .035W	24,4800 ft (1.53 m)	100-Large Fab - Basket - 1	5260577

Job Allocations

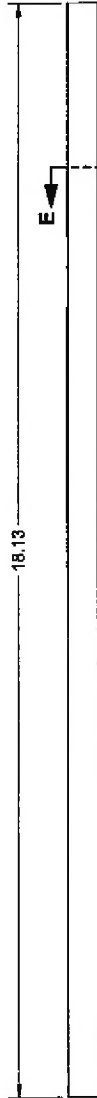
Operation	Component Part	Required	Inventory	Allocated
100-Large Fab - Basket - 1	M4130NTS0.500W.035	24	577	0

Part Specifications

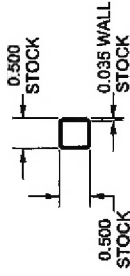
Specifications could not be found.



D5807-5 STRINGER



D5807-7 STRINGER



SECTION E-E

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 207514

UNDER REVIEW

URF 2020-525 20.02.20 (NO)

- NOTES:
- 1) MATERIAL: AISI 4130N STEEL SQUARE TUBING, 1/2" X 0.035 WALL, PER MIL-T-6726 OR AMS 6371/6380/6361/6362/6373/6374 REF DART SPEC M4130N-T50.500W.035
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.006 TO 0.010
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: -5: 0.31 lbs
-7: 0.32 lbs

RELEASED

2020 FEB 19

APPROVED

DESIGN	ZF	DART AEROSPACE LTD	REV. A
DRAWN	ZF	HAWKESBURY, ONTARIO, CANADA	SHEET 4 OF 6
CHECKED	KPT	DRAWING NO.	SCALE
MFG. APPR.	DO	D5807	NTS
APPROVED	NO	TITLE	
DE APPR.	CP	MEDIUM LID ASSY	
DATE	20.01.21		

COPYRIGHT © 2020 BY DART AEROSPACE LTD
THIS DOCUMENT IS UNCLASSIFIED AND IS AVAILABLE TO THE PUBLIC EXCEPT WHERE SHOWN OTHERWISE
DART AEROSPACE LTD 2020-525

2/19/2020

PURCHASE ORDER



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045883



Supplier: FAC001-VU
Factory Steel
14020 Oakland Ave.
Detroit, MI 48203 USA
Phone: 313 883 6300
Fax: 313 883 4883

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB045883

PO Date: 2/18/20

Due Date: 2/28/20

Purchase Order

Revision:

Revision Date:

FEB 19 2020

Issued By:

Lavoie, Chantal
Phone: 613-623-5200 Ext: 242
Fax: 613-632-1053
clavoie@dartaero.com

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments:

Items														
Line Work	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price	
1		M4130NTS0.500W.035			4130 Square Tube .500 X .500 X .035W MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-8735 OR AMS 6371/6380/6361/6362 6373/6374 receive it	Firmed	-	2/28/20	600 ft	0 ft 601 ft 603	600 ft	\$6.49/ft	\$3,894.00	
													Grand Total: \$3,894.00	

Order Notes

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable). No Raw Metals from China or Soviet Bloc Countries. (DFARS)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program.

A049 supplier awareness.

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit
www.dartaerospace.com for further explanation.

Plax 2/19/20 2:52 PM Dart.Lavoie.Chantal

PACKING LIST

No. 67811

PG 1 OF 1

FACORY STEEL & METAL SUPPLY
14020 OAKLAND AVENUE
DETROIT, MI 48203

(313)883-6300 PHONE
(313)883-4883 FAX

SOLD TO
DART AEROSPACE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7

CUSTOMER P.O.
PO#8045883
CUSTOMER JOB

SALES ORDER
60752
ORDER DATE
02/19/2020

SHIP TO
DART AEROSPACE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7

BUYER
CHANTEL LAVOIE
Tel (613) 632-3336
Fax (613) 632-4443

SALES REP
MICK HALON
SHIP INST
CALL WHEN READY
PRO#

SHIP DATE
02/21/2020
SHIP VIA
****TRUCK****
RESALE #
59-2958719
CARRIER
TRUCK
BLIND Y/N
N
FOB
DETROIT

TERMS
NET 30 DAYS

LINE	QUANTITY	DESCRIPTION	WIDTH	LENGTH	WEIGHT
1	611.667 FT	<p>PACK IN CARDBOARD TUBE</p> <p>4130N CD SWISS SQ TUBE 1/2" X .055N NLT-6736</p> <p>Tag M111 Ref # Heat 25537</p> <p>154506 023914</p> <p>NETS (CIRCLE) FAX SHIPMENT INVOICE ALL</p> <p>DATE: INITIAL:</p>	Pcs Length 27 21'724" RL	21'724" RL	<p>Feet 611.667</p> <p>Weight 135.361</p>

TOTAL WT
135 LBS

RECEIVED BY - SIGNATURE

RECEIVED BY - PRINTED NAME

DATE RECEIVED

50

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130NT50.520W.035 PO / BATCH NO: P0490Y5803
 DATE: MAR 04 2020 5260577

MATERIAL CERT REC'D: YES
 QUANTITY RECEIVED: 611 FT
 QUANTITY INSPECTED: 611 FT
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .500X.520 W.035
 THICKNESS RECEIVED: .500X.520 W.035
 SHEET SIZE ORDERED:
 SHEET SIZE RECEIVED:

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/> N	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER W-DRAWING	<input checked="" type="checkbox"/> N	<u>MIL-T-6736</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/> N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> N	<u>HIT 23537</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC IS INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u> </u>	DATE: <u>MAR 04 2020</u>	SIGNED OFF BY: <u> </u>	DATE: <u> </u>

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

LIME1

M4130NTS0.500W.035

10413045887



DESIGN DH	DRAWN BY DH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. M4130N-TS	REV. A SHEET 1 OF 1
DATE 05.02.09		TITLE 4130N SQUARE TUBING SCALE NTS	
A	05.02.09	NEW ISSUE	

PURCHASE MATERIAL:

AISI4130N STEEL SQUARE TUBING PER ONE OF
THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371,
6360, 6361, 6362, 6373 OR 6374

CAS

PART NUMBER:

M4130N-TS | A.AAA | W | .TTT |

WHERE A.AAA = WIDTH IN INCHES
TTT = WALL THICKNESS IN INCHES

EXAMPLE: 0.50" X 0.035" WALL = M4130N-TS0.500W.035

05.03.05

Copyright © 2005 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



PLYMOUTH TUBE CO.

1300 East 13th Street, Detroit, Michigan 48203
Phone: (313) 973-1515 Fax: (313) 972-7543

TRUST YOUR SOURCE - ACCEPT NO SUBSTITUTES

PRODUCT CERTIFICATION

SALES ORDER - LINE / RLS

179087 - 51 / 0

SHIP TO

Factory Steel & Metal Supply C
14020 Oakland Avenue
Detroit, MI 48203
USA

WORK ORDER 023914

HEAT NUMBER 25537

MELT SOURCE Tinklen Steel - Melt/Mfg. USA

PCS/HEAT

0

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LOADING NO	CERT ID / REV	CERT DATE								
3999	SQ-N12035												
PART DESCRIPTION SHSQ0500035J200 ***** Square OD ***** Side1: 0.5000 Max:0.5100 Min:0.4900 Side2: 0.5000 Max:0.5100 Min:0.4900 Wall: 0.0350 Max:0.0380 Min:0.0320 Length: 10.5350-10.5350 Spec: (MIL-T 6736B) Seamless Aircraft Grade: 4420 Anneal: Cond N													
CERTIFICATION REQUIREMENTS FAR BAA (FAR 52.225-1 Buy America Act Supplies), DFARS 252.225-7001 Buy America Act & Bal. of Payments Program FAR TAA (FAR 52.225-6 Trade Agreement) Paragraph (b)(1) This material was produced in accordance with the requirements of ASTM A-450. The Grain size is determined and reported by the raw material supplier in accordance to ASTM E-112. This raw material was magnetic particle inspected by the raw material supplier in accordance to AMS 2640J and/or ASTM E-1444, and rated as Frequency, and Severity to AMS 2301, latest revision. Yield is determined by using the 0.2% offset method. Additional Specifications - AMS-T 6736B, 6360P & 6371L. Material produced in accordance to ASTM A-519-17. Jominy results: J(5/16")=36 J(8/16")=31.													
Chemical Analysis													
C	Mn	P	S	Si	Al	Cr	Mo	Ni	Pb	Cu	V	Ti	Sn
.30	.56	.008	.005	.29	.025	1.02	.20	.13	.000	.18	.009	.003	.009
Physical Properties													
Freq.	Severity	Grain Size											
.000	.000	7											
Mechanical Properties													
TEST	UNITS	#TESTS	HIGH	LOW	AVERAGE	STD-DEV							
Tensile	Psi	6	121110	115340	118173	2536							
Yield	Psi	6	115370	109700	112526	2436							
Elongation	%	6	17	17	17	0							
Rockwell C	Rc	6	22	22	22	0							
TEST	RESULT												
Decarb/OD	Pass												
Total ID/OD decarb	Pass												

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streator in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

James D. Smith
Quality Assurance



PLYMOUTH TUBE CO.
 3400 East 12th Street, Detroit, MI 48203
 Phone: (313) 673-1915 Fax: (313) 672-7333
TEST YOUR SOURCE FOR FRAUDS AND SUBSTITUTIONS

PRODUCT CERTIFICATION

SALES ORDER - LINE / RLS
 179337-1 / 0

WORK ORDER 025041 PCS/HEAT 0
 HEAT NUMBER 25537
 MELT SOURCE Tension Steel - melt/mfg. USA

SHIP TO

Factory Steel & Metal Supply C
 14020 Oakland Avenue
 Detroit, MI 48203
 USA

CUSTOMER P.O. 3999	CUSTOMER PART SQ-N12035	QUANTITY	LOADING NO	CERT ID / REV	CERT DATE
PART DESCRIPTION SHSQ0500035J200					
<u>Additional Specification(s)</u>					
<u>TEST</u> Brinell	<u>UNITS</u> Brinell	<u>TESTS</u> 1	<u>HIGH</u> 251	<u>LOW</u> 187	<u>AVERAGE</u> 226
					<u>STD-DEV</u> 27
<p>This test report data is for the heat Chemistry listed above.</p> <p>The material in this test report is:</p> <ol style="list-style-type: none"> 1) Drawn in the USA 2) Free from Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), and Mercury contamination. 3) NAFTA compliant. <p style="text-align: right;">End of Certification</p>					

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streater in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

Janis Blumsohl
 Quality Assurance

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION			DEPARTMENT/PROCESS			MRB (QS1042)							
Date: _____		Sequence #: _____			QTY Affected: _____			Completed By _____							
Description Work Order Deviation		Disposition			Lead hand / Supervisor _____			QC / QA Coordinator _____							
Root Cause Operator <input type="checkbox"/> Manufacturing Process <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Handling/Preservation <input type="checkbox"/> Material <input type="checkbox"/> Product Improvement <input type="checkbox"/> Process Improvement <input type="checkbox"/> Human Factors <input type="checkbox"/>		FAULT CATEGORY													
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Bending <input type="checkbox"/> Crushing <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Mislabeled Other/Details: _____				<input type="checkbox"/> Contamination <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Incomplete/Unclear Instructions <input type="checkbox"/> Drill Holes <input type="checkbox"/> Fit/Function				<input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain Direction <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Off-set/Set-up				<input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Outside Tolerance <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Misread	